

### Remarks/Argument

In the Office Action dated April 14, 2006, the Examiner rejected claim 1 under 35 U.S.C. § 103(a) as being unpatentable over Abe (U.S. Patent Application Publication No. 20020142660), Leddige et al. (“Leddige”) (U.S. Patent No. 6144576), Dixon et al. (“Dixon”) (U.S. Patent No. 6081862); rejected claims 2 and 4 under 35 U.S.C. § 103(a) as being unpatentable over Abe, Leddige, Dixon, and Doblar et al. (“Doblar”) (U.S. Patent Application Publication No. 20030043613); and rejected claims 3 and 5-11 under 35 U.S.C. § 103(a) as being unpatentable over Abe, Leddige, Dixon, Doblar, and Ono et al. (“Ono”) (U.S. Patent Application Publication No. 20020041020.)

#### Claim 1

Applicants respectfully traverse the rejection of claim 1 under 35 U.S.C. § 103(a) as being unpatentable over Abe, Leddige, and Dixon. No *prima facie* case of obviousness has been established with respect to claim 1 for at least the reason that the combination of Abe, Leddige, and Dixon fails to disclose or suggest every claim element included in claim 1.

For example, claim 1 includes a combination of elements including, *inter alia*, “at least one single in-line memory module (SIMM),” “at least one dual in-line memory module (DIMM),” and “wherein a length of the signal transmission line of the at least one SIMM is longer than a length of the signal transmission line of the at least one DIMM.” (Emphasis added.) The combination of Abe, Leddige, and Dixon fails to disclose or suggest at least these claim elements.

In the Office Action, the Examiner maintained that Leddige discloses that “the length of a signal line determines the electrical delay and capacitance (an equivalently, load) on the signal line.” See Office Action, paragraph 6, at page 4.

However, Leddige fails to disclose or suggest that “a length of the signal transmission line of the at least one SIMM is longer than a length of the signal transmission line of the at least one DIMM,” as required by claim 1. (Emphasis added.) On the contrary, Leddige discloses that the lengths of signal transmission lines are equal. See Leddige, column 5, lines 2 and 3. Indeed, Leddige discloses that the signal transmission lines are routed such that they are equal in length. See Leddige, column 5, lines 45-47. Thus, Leddige teaches away from the requirement of claim 1 that “a length of the signal transmission line of the at least one SIMM is longer than a length of the signal transmission line of the at least one DIMM.” (Emphasis added.)

The Examiner however maintained that Dixon discloses “allow[ing] a SIMM to have a longer length of transmission line than the DIMM.” See Office Action, paragraph 6, at page 4 (citing Dixon at column 1, lines 66 and 67, and column 2 lines 1-4.) However, a careful reading of Dixon indicates that Dixon does not teach the use of “at least one DIMM” and “at least one SIMM” as required by claim 1. Instead the disclosure in Dixon is apparently directed only towards the use of DIMMs. See Dixon, column 1, lines 29-50. Indeed, Dixon discloses the use of either DRAM DIMMs or SDRAM DIMMs only. See Dixon, column 4, lines 1-15. In fact, as seen in FIG. 4 of Dixon, the switching system of Dixon may not be used for both DRAM DIMMs and SDRAM DIMMs simultaneously. See Dixon, FIG. 4 and column 4, lines 15-65. Thus, the disclosure of Dixon does not teach “at least one single in-line memory module (SIMM),” “at least one dual in-line memory module (DIMM),” and “wherein a length of the signal transmission line of the at least one SIMM is longer than a length of the signal transmission line of the at least one DIMM,” as required by claim 1. (Emphasis added.)

Furthermore, the Examiner conceded that “[Abe] does not expressly disclose a longer length of the at least one SIMM signal transmission line than that of the at

least one DIMM," as required by claim 1. See Office Action, paragraph 6, at page 4. Thus, for at least the reason that the combination of Abe, Leddige, and Dixon, fails to disclose or suggest every element included in claim 1, the Section 103(a) rejection of claim 1 should be withdrawn.

#### Claims 2 and 4

Applicants respectfully traverse the Section 103(a) rejection of claims 2 and 4 for at least the reason that the combination of Abe, Leddige, Dixon and Doblar fails to disclose or suggest every element included in claims 2 and 4. For example, claim 2 depends from and adds additional features to independent claim 1. Moreover, Doblar, relied on for its disclosure "that the load of the at least one memory device of the at least one SIMM is less than the load of the at least one DIMM," (see Office Action, paragraph 7, at page 8,) fails to remedy the deficiency of Abe, Leddige, and Dixon.

Independent claim 4, although different in scope, includes elements similar to those of claim 1. Moreover, Leddige, relied on for its disclosure of a memory controller (see Office Action, paragraph 7, at page 8,) fails to cure the deficiency of the combination of Abe, Dixon, and Leddige, as discussed above in the traversal of the rejection of claim 1. For at least these reasons, the Section 103(a) rejection of claims 2 and 4 should be withdrawn.

#### Claims 3 and 5-11

Applicants respectfully traverse the Section 103(a) rejection of claims 3 and 5-11 for at least the reason that the combination of Abe, Leddige, Dixon, Doblar, and Ono fails to disclose or suggest every element included in claims 3 and 5-11. Claims 3 and 5-11 depend from and add additional features to one of independent claims 1 and 4. Furthermore, Ono, relied on for its disclosure that "as the number of

sockets increases, the length of the bus wiring becomes longer, and the wiring capacity (and equivalently, load) increases" (see Office Action, paragraph 8 at page 6,) fails to cure the deficiency of the combination of Abe, Leddige, Dixon, and Doblar.

Conclusion

In view of the foregoing remarks, Applicants respectfully request reconsideration and reexamination of this application and timely allowance of the pending claims.

Respectfully submitted,  
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